

METHOD AND APPARATUS FOR CORRELATING  
FLIGHT IDENTIFICATION DATA WITH  
SECONDARY SURVEILLANCE RADAR DATA

ABSTRACT OF THE DISCLOSURE

5           A system for correlating secondary surveillance radar  
(SSR) data and ACARS data which results in a real time  
correlation of data which are unique to the separate  
existing systems. More specifically, a method is provided  
to attach flight identification data from ACARS signals to  
10       real time SSR data from Mode S transponders. Aircraft Mode  
S addresses are decoded and then converted to aircraft  
registration numbers using an algorithm or lookup table.  
Registration numbers are then correlated with registration  
15       numbers from decoded ACARS signals. The result is a real-  
time system which may provide an aircraft's registration  
information, including registration number, owner, make, and  
model, as well as its current flight identification number,  
and ACARS messages. As part of an aircraft multilateration  
20       system, the system provides an independent air traffic  
control picture complete with aircraft position and  
identification by flight number without the use of active  
radar equipment.